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URGES MANUFACTURE OF SPARK-HARDENING UNITS; BEARINGS POLISHED IN 3 MINUTES

DEMANDS WIDER USE OF SPARK HARDENING -- Moskovskiy Bol'shevik No 305, 28 Dec 49

One way of increasing labor productivity and saving money in the machine building industry is by increasing the life of machine and tool parts

Soviet scientists and inventors were the first in the world to develop the electric-spark method for hardening the wearing surfaces of machines and tools and are continuing to perfect this method.

The process of surface hardening is not particularly difficult. The equipment is simple and can be built by any enterprise The hardening itself is done by electrodes of hard alloys of the titanic group or from graphite.

The technology of the process is not in the least complicated and the operation can be carried out by a third-class worker.

Since 1946 the All-Union Scientific-Research Tool Institute has been carrying on a great deal of work on this process and has proved the cutting properties of spark-hardened tools.

According to data of a number of plants hardening by the electric-spark method increases considerably the durability of tools and dies. Thus, the durability of cutters increases2-4 times, spiral drills 2-5 times, cut-off saws 3-4 times, millers 2-3 times, chisels for trimming cast material 4-6 times gear-wheel cutters 1.5-2.5 times punching dies 2 5 times, etc.

It is necessary to note that every type of tool is worked according to its own peculiarities and requires its own specified technology. The effectiveness of increasing durability depends to a great extent on the correctness of the technological process.

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At the same time, the new process must be extensively propagandized. The Moscow section of the Scientific Engineering and Technical Society has as yet done nothing about this. The time has come to call a conference for an exchange of experiences in the hardening of tools at plants and at research organizations.

In Moscow industries alone, introduction of the process will permit a saving of over 400 million rubles per year. In addition, while decreasing the demand for cutting tools, it will permit the freeing of considerable area in tool shops. -- Ye. Ulitskiy, Candidate in Technical Sciences.

/It would appear from the above reference to "consumption of hard alloy" that the process here described as "hardening" (uprochneniye) of tools is identical with the spark "plating" (pokryvaniye) of tools [redacted] Plants already identified in the press as using spark plating include the Elektrosila (which claims development of the process), Krasnyy Vyborzhets, Metal Plant imeni Stalin, the Leningrad Elektroinstrument, the Plant imeni Karl Libknekht, and the Kirov Plant./

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BEARINGS POLISHED ELECTRICALLY -- Leningradskaya Pravda, No 267, 13 Nov 49

The Leningrad Plant imeni Engels is polishing 20,000 steel parts a month by the electric method. The finished surfaces are exceptionally smooth and brilliant. Their corrosion-resistant properties are remarkable. The finishing time for ball-bearing surfaces by electrical polishing has been cut to only 3 minutes. Mechanical methods for the same job require 20 minutes. The new method is currently being applied to parts for textile- and shoe-manufacturing machines. Experiments to extend the field of application are also under way.

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DESIGNS ELECTRIC-SPARK EQUIPMENT -- Kommunist, No 268, 15 Nov 49

The Polytechnical Institute imeni Karl Marx in Yerevan has designed electric-spark metalworking equipment for the Yerevan Electrical Machine-Building Plant.

INTRODUCES ANODE CUTTING, GRINDING -- Polsk Zbrojna, No 337, 8 Dec 49

In honor of Stalin's 70th birthday anniversary, the workers of the General K. Swierczewski Metal Products Plant in Warsaw will introduce the latest achievement of Soviet technology -- anode cutting and grinding of Vidia alloys.

INSTALLS ELECTRIC-SPARK MACHINE TOOL -- Leningradskaya Pravda, No 248, 20 Oct 49

The Komsomol'skaya Pravda Plastics Plant in Leningrad, which makes parts for telephone, movie, and other types of electrical equipment, has installed an electric-spark machine tool which processes parts for complex pressmoulds. The work is rapid and of the highest quality.

USES ELECTRIC-SPARK GRINDING -- Sovetskaya Estoniya, No 274, 22 Nov 49

The Tallin Machine-Building Plant now uses electric-spark grinding of cutting tools.

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